

## A B S T R A C T

A method for processing a target substrate (10) in a semiconductor processing apparatus (1) controls temperature of a first substrate (10) at a process temperature inside a process container (2), while  
5 supplying a process gas into the process container, thereby subjecting the first substrate to a semiconductor process, during which a by-product film is formed inside the process container. After the  
10 semiconductor process and unload of the first substrate (10) out of the process container (2), a reforming gas is supplied into the process container, thereby subjecting the by-product film to a reformation process, which is set to reduce thermal reflectivity of  
15 the by-product film. After the reformation process, temperature of a second substrate (10) is controlled at the process temperature inside the process container (2), while supplying the process gas into the process container, thereby subjecting the second substrate to  
20 the semiconductor process.